

TACKLING COMMUNITY ISSUES : PROBLEM AND SOLUTION TREES

| GRADES 3-9 SOCIAL STUDIES | SAMPLE LESSON PLAN

Alberta's new curriculum has a strong focus on global citizenship and encouraging students to take action and make change in our communities. **Problem and Solution Trees** are project planning tools, similar to a mind map, used by community organizations to guide groups through analyzing a community problem, and develop a shared vision for action. When adapted for the classroom, this tool will help students develop problem solving and critical thinking skills as an active global citizen, planning actions to make change in their own schools or communities

Problem and Solution Trees

Links to Core Competencies

- **Managing Information:** Synthesizing or organizing multiple pieces of information to enhance or clarify understanding
- **Critical Thinking:** Applying reasoned approaches or relevant criteria to conceptualize, analyse or make judgements
- **Problem Solving:** Assessing options to generate courses of actions/Evaluate the impact of possible solutions to carry out the most viable option
- **Communication:** Considering perspectives, emotions and experiences when seeking shared understandings
- **Personal Growth and Well-being:** Building healthy relationships to support growth and well-being of self and others
- **Creativity and Innovation:** Recognizing opportunities and imagining possibilities to apply ideas in new ways
- **Collaboration:** Sharing responsibilities and supporting others to achieve a common goal
- **Cultural and Global Citizenship:** Demonstrate responsible citizenship through actions that contribute to healthy and sustainable communities

See Alberta Education's Guiding Framework at: <https://education.alberta.ca/curriculumdevelopment/>

Resources and Supplies

- **Wangari's Trees of Peace** by Jeanette Winter Harcourt Children's Books; 1 edition (July 31 2008)
- Clip from **Dirt! The Movie** <http://www.dirtthemovie.org/videos/>
- Problem Tree Brainstorming Handout
- Problem Tree to Solution Tree Handout
- Problem and Solution Tree Power Point Presentation
- Flipchart paper, markers, and Post-It notes

Purpose

Using the children's book 'Wangari's Trees of Peace' as a model, students will use the Problem and Solution Tree analysis tool to analyse problems, develop solutions, and take action as global citizens. *****This tool is best used in a context where students are planning actions to solve challenges in their school or community*****

Introduction

Introduce students to Wangari Maathai, who was the Nobel Peace Prize winner in 2004, amongst other prestigious awards and honours: <http://www.greenbeltmovement.org/wangari-maathai/biography>.

Activities/Experiences

MODEL THE METHOD

- Read the book, 'Wangari's Trees of Peace' to the class. An audio version is also available online at <https://www.youtube.com/watch?v=jK1NndEf6f0>
- **Problem Tree:** Provide flipchart paper, markers, and post-it notes to groups. Ask groups to draw a large tree, writing 'Causes' by the roots, 'Problem' by the trunk, and 'Effects' by the Branches. Together, students write the main problem Wangari faced in the book, the causes of that problem, and the effects it had on her community on post it notes, and place on the paper. This allows students to move the items around, and find deeper causes, or further impacts. **Share**

- **Solution Tree:** On another piece of flipchart paper, students create a solution tree, with *Output, Outcome, and Impact*. Start by rewriting the main problem, as the outcome on the trunk. Write the statement as if the problem is resolved (*The community had no trees -> The community has trees.*) Now, rewrite the causes into positive outputs, and the negative effects into positive impacts. Model one before students attempt on their own.
- **Project Statement: If -> Then -> So that** Imagine you are Wangari, and have to describe your project to someone else. Write your project statement as one sentence, starting with the output, then outcome, to impact. (Example: **If** we train women to plant trees, **then** the community will have trees, **so that** the environment will be improved).
- **Extention: Project Evaluation:** It is important to not end there! Students need to think about evaluating projects! It is not enough to do a project and assume it will work. We must always measure our efforts, and that takes planning! Using evidence from the book, discuss together, how we know Wangari was successful, and how it was measured. (See Power Point for examples) *The short term output is easier to measure than a long term impact. At a minimum, encourage students to brainstorm one way to evaluate their output.

APPLY THE METHOD

- Students apply the Problem Tree analysis method to a problem they are trying to address in their school or community. Students can use individual copies of the **Problem Tree Brainstorming Handout** OR work in groups with flipchart paper.
- After brainstorming is completed, students decide the main cause they would like, and are able, to tackle, and fill this out on the **Problem Tree to Solution Tree Handout**. Following the same method used to analyse Wangari's problem and solution, students convert their negative problem statements into positive solution statements, and create a final project statement. Students should also decide on at least one way they will measure the success of the outcome of their project. For more advanced students, they can come up with ways to measure their outputs, outcomes, and impact.

Conclusion

Sometimes problems can seem so large, and the solutions so complicated. Encourage students to keep positive by watching the clip "I will be a hummingbird" from **Dirt! The Movie** <http://www.dirtthemovie.org/videos/>. **Discuss:** *Why does Wangari say, 'We should always feel like a hummingbird?' What lesson can we apply when carrying out our own projects?*

Extension

Social Studies

- Partnering students with a local community group to analyse a problem they work to address in the community
- Build research skills by requiring students to research the causes of the problems, or solutions that others have tried.

English Language Arts:

- Students can write and illustrate their own children's story, based on project, to inspire others to take action.

Assessment for Student Learning

Some ways of assessing student growth during this activity include:

- Students conduct self-assessments based on the competencies to evaluate their growth during the project.
- Students write a project description, describing the problem, and justifying solution they choose.
- Students orally present their projects to the class, and answer questions from peers

Keywords and Terminology:

Context Terminology:

- **Output*** - The activity you will conduct during your project
**For the purpose of this lesson, the 'output' is the main activity the project will conduct. However, in reality, the 'output' is the result of many smaller activities. For example, 'Women are trained in tree planting' is the result of many activities, including workshops, training days, and awareness campaigns.*
- **Outcome** – The immediate result achieved in the project
- **Impact** – The long term results achieved in the project.
- **Evaluation** – To make a judgement about the value of the project

Teacher Background

Background on Problem and Solution Trees and their use in International Development

- **The Problem Tree: TIPS InfoSheet 103 Canadian Foodgrains Bank**
<https://www.foodgrainsbank.ca/uploads/tips/tips103.pdf>
- **How To Design a New Program: Tools 4 Development** <http://www.tools4dev.org/resources/how-to-design-a-new-program/>
- **Planning tools: Problem Tree Analysis: Toolkits January 2009.** Overseas Development Institute
<https://www.odl.org/publications/5258-problem-tree-analysis>
- **Problem Tree/Solution Tree:** Creative Action Institute, adapted from European Commission, 2004.
<http://creativeactioninstitute.org/assets/CCC-PDFS/Activity-Instructions/ProblemTreeSolutionTreeActivityInstructions.pdf>
- **The Green Belt Movement - Wangari Maathai (1940-2011)** <http://www.greenbeltmovement.org/wangari-maathai>
- **Wikimedia Commons - Wangari Maathai** https://commons.wikimedia.org/wiki/Wangari_Maathai

Learn about Alberta-based organizations working to make locally and globally!

Information on the Alberta Council for Global Cooperation and Member Organizations can be found at

www.acgc.ca